#### Introduction to HTML

http://www.w3schools.com/

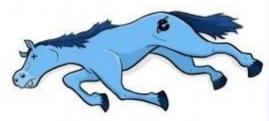
#### **Browsers and Transportation**

#### Firefox



Fairly well-rounded, but nearly unusable because of all its stupid add-ons.

#### Internet Explorer



Worthless, but good for the occasional bashing.

Safari



While very efficient, its quality is vastly exaggerated by the people that use it.

Opera



Some people really love it, everyone else just thinks it looks f\*cking stupid.

#### Chrome



#### What is an HTML File?

- HTML stands for Hyper Text Markup Language
- An HTML file is a text file containing small markup tags
- The markup tags tell the Web browser how to display the page
- An HTML file must have an htm or html file extension
- An HTML file can be created using a simple text editor

```
<html>
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
```

```
<html>: the start of an HTML document
<html>
          – </html>: the end of the HTML document
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
```

```
<head> </head>: Header information is
<html>
         not displayed in the browser window.
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
```

```
Title of page
                  ← → C 🐧 🕓 file:///D:/prog/jsp/examples.2010/A.simple.html.html
                  🛂 G 🦲 S 🦲 prog 🦲 research 🦲 eng 🦲 Forum 🦲 protal 🦲 teaching
<html>
                  This is my first homepage. This text is bold
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
           <title> </title>: the title of your
              document.
               - The title is displayed in your
                 browser's caption.
```

```
<body></body>: the text that will be
<html>
         displayed in your browser.
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
```

```
Title of page
                    ← → C 🐧 🕓 file:///D:/prog/jsp/examples.2010/A.simple.html.html
                    🛂 G 🦲 S 🦲 prog 🦲 research 🦲 eng 🦲 Forum 🦲 protal 🦲 teaching
<html>
                    This is my first homepage. This text is bold
<head>
<title>Title of page</title>
</head>
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
</html>
```

<b></b>: the text between the <b> and </b>
tags will be displayed in a bold font.

#### **HTML Documents**

- ◆HTML documents are text files made up of HTML elements.
- HTML elements are defined using HTML tags.

#### **HTML Tags**

- ◆ HTML tags are used to mark-up HTML elements
- ◆ HTML tags are surrounded by the two characters < and >
- ◆ The surrounding characters are called angle brackets
- ◆ HTML tags normally come in pairs like <b> and </b>
- The first tag in a pair is the start tag, the second tag is the end tag
- The text between the start and end tags is the element content
- HTML tags are not case sensitive, <b> means the same as <B>

#### **HTML Elements**

#### <b>This text is bold</b>

- ◆The HTML element starts with a start tag: <b>
- ◆The content of the HTML element is: This text is bold
- ◆The HTML element ends with an end tag: </b>
- ◆The purpose of the <b> tag is to define an HTML element that should be displayed as bold.

### **HTML Elements (Cont.)**

◆This is also an HTML element:

```
<body>
This is my first homepage.
<b>This text is bold</b>
</body>
```

◆The purpose of the <body> tag is to define the HTML element that contains the body of the HTML document.

## Why do We Use Lowercase Tags?

- ◆HTML tags are not case sensitive
- ◆To follow the latest web standards, you should always use lowercase tags.
- Recommendations: W3C, HTML 4

### **Tag Attributes**

Tags can have attributes to provide additional information to an HTML element.

■ With an added border attribute, you can tell the browser that the table should have no borders.

#### <tag name="value">

- Attributes always come in name/value pairs like this: name="value".
- Attributes are always specified in the start tag of an HTML element.



#### **Always Quote Attribute Values**

- Attribute values should always be enclosed in quotes.
- ◆ Double style quotes ("") are the most common, but single style quotes (") are also allowed.
- ◆In some rare situations, like when the attribute value itself contains quotes, it is necessary to use single quotes:
  - ■name='John "ShotGun" Nelson'

# **Basic HTML Tags**

Tag	Description
<html></html>	Defines an HTML document
<body></body>	Defines the document's body
<h1> to <h6></h6></h1>	Defines header 1 to header 6
<	Defines a paragraph
 br>	Inserts a single line break
<u><!-- --></u>	Defines a comment

#### Headings

- ◆ Headings are defined with the <h1> to <h6> tags.
- <h1> defines the largest heading. <h6> defines the smallest heading.
- HTML automatically adds an extra blank line before and after a heading.

```
<h1>This is a heading</h1>
<h2>This is a heading</h2>
<h3>This is a heading</h3>
<h4>This is a heading</h4>
<h5>This is a heading</h5>
<h6>This is a heading</h6>
```

#### **Paragraphs**

- ◆Paragraphs are defined with the tag.
- ◆HTML automatically adds an extra blank line before and after a paragraph.

```
This is a paragraphThis is another paragraph
```

#### **Line Breaks**

- The <br/>br> tag is used when you want to end a line, but don't want to start a new paragraph.
- ◆The <br/>br> tag forces a line break wherever you place it.

This <br > is a para<br > graph with line breaks

◆The <br/>br> tag is an empty tag. It has no closing tag.

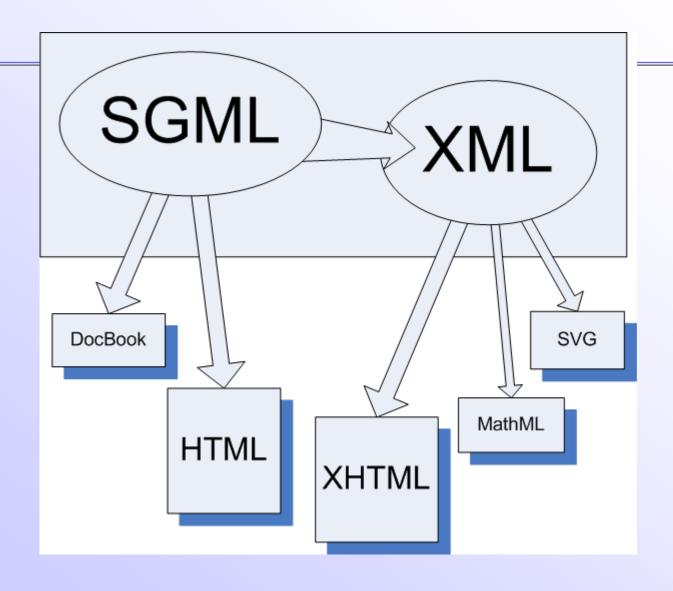
#### **Comments in HTML**

- ◆The comment tag is used to insert a comment in the HTML source code.
- ◆A comment will be ignored by the browser.

```
<!-- This is a comment -->
```

#### **Basic Notes - Useful Tips**

- Never try to format the text in your editor by adding empty lines and spaces to the text.
- ◆HTML will truncate the spaces in your text. Any number of spaces count as one.
- ◆Paragraphs can be written without the closing tag , but
  - the next version of HTML will not allow you to skip ANY closing tags.



標準通用標示語言(Standard Generalized Markup Language,SGML)

## XHTML 和 HTML 4 的區別

- ◆文檔應該是良構(Well-formedness)的
- ◆元素名和屬性必須統一小寫
- ◆空元素必須有一個結束標籤
- ◆對於非空標籤,也需要結束標籤
- ◆屬性值必須總是使用引號包裹

## 文檔應該是良構的

- ◆正確的:元素嵌套
  - ■<em>這是一個被強調的段落。</em>
- ◆錯誤的:元素交叉
  - ■<em>這是一個被強調的段落。</em>

## 元素名和屬性必須統一小寫

◆XHTML文檔把所有的HTML元素名和屬性名都小寫。這個區別是必須的,因為XML是大小寫敏感的。比如,和<LI>是完全不同的兩個標籤。

## 空元素必須有一個結束標籤

- ◆正確的:結束空標籤
  - **I**<br/><hr/><</p>
- ◆錯誤的:沒有結束空標籤

# 對於非空標籤,也需要結束標籤

- ▶正確的:結束的元素
  - ■這是一個段落。這是另一個段落。

- 一錯誤的:沒有結束的元素
  - ■這是一個段落。這是另一個段落。

### 屬性值必須總是使用引號包裹

- ◆所有的屬性值都必須使用引號包含,包括 那些以數值類型出現的。
  - ■正確的:屬性值使用引號
  - ■錯誤的:屬性值沒有使用引號

# **Text Formatting Tags**

Tag	Description
<u><b></b></u>	Defines bold text
   	Defines big text
<u><i>&gt;</i></u>	Defines italic text
<sub></sub>	Defines subscripted text
<sup></sup>	Defines superscripted text
<ins></ins>	Defines inserted text
<del></del>	Defines deleted text

#### **HTML Character Entities**

- ◆Some characters like the < character, have a special meaning in HTML, and therefore cannot be used in the text.
- ◆To display a less than sign (<) in HTML, we have to use a character entity.</p>
- A character entity has three parts:
  - ■&+entity name+; ex: <
  - or &+#+entity number+; ex: <
- ◆The entities are case sensitive.

#### **Non-breaking Space**

- ◆The most common character entity in HTML is the non-breaking space.
- Normally HTML will truncate spaces in your text.
  - ■If you write 10 spaces in your text, HTML will remove 9 of them.
- ◆To add spaces to your text, use the character entity.

# The Most Common Character Entities:

Result	Description	Entity Name	Entity Number
	non-breaking space		<b>&amp;</b> #160;
<	less than	<	<b>&amp;</b> #60;
>	greater than	>	<b>&amp;</b> #62;
&	ampersand	&	<b>&amp;</b> #38;
11	quotation mark	"	<b>&amp;</b> #34;

#### html character entities

CHARA	CTE	RS
		Space
!	!	Exclamation mar
"	"	Quotation mark
#	#	Pound symbol
\$	\$	Dollar sign
%	%	Percent sign
&	8.	Ampersand
'	,	Apostrophe
(	(	Opening bracke
)	)	Closing bracket
*	*	Asterisk
+	+	Plus
,	,	Comma
-	-	Hyphen
.		Period
/	/	Forward slash
0	0	Zero
1	1	One
2	2	Two
3	3	Three
4	4	Four
5	5	Five
6	6	Six
7	7	Seven
8	8	Eight
9	9	Nine
:	:	Colon
;	;	Semicolon
<	<	Less than
=	=	Equals sign
>	>	Greater than
?	?	Question mark
@	@	"At" symbol
A	Α	Upper case A
B	В	Upper case B
C	С	Upper case C
D	D	Upper case D
E	Е	Upper case E
F	F	Upper case F
G	G	Upper case G
8,#72;	Н	Upper case H
I	I	Upper case I
8,#74;	j	Upper case J
K	К	Upper case K
8#76;	L	Upper case L
M	М	Upper case M
N	N	Upper case N
F O	0	Upper case O
P	P	Upper case P
a., 00,		opper case r

CHARA	CTE	रड
0.401	_	
Q R	Q	Upper case Q
	R	Upper case R
S	S	Upper case S
T	Т	Upper case T
U	U	Upper case U
V	٧	Upper case V
W	W	Upper case W
X	Χ	Upper case X
Y	Υ	Upper case Y
Z	Z	Upper case Z
[	[	Opening square
		bracket
\	\	Backslash
]	]	Closing square
		bracket
^	^	Caret
_	_	Underscore
`	•	Single quote
a	а	Lower case a
b	b	Lower case b
c	C	Lower case c
d	d	Lower case d
e	e	Lower case e
f	f	Lower case f
g	g	Lower case g
h	h	Lower case h
i	i	Lower case i
j	j	Lower case j
k	k	Lower case k
l	1	Lower case I
m	m	Lower case m
n	n	Lower case n
o	0	Lower case o
p	р	Lower case p
q	q	Lower case q
r	r	Lower case r
s	s	Lower case s
t	t	Lower case t
u	u	Lower case u
v	V	Lower case v
w	w	Lower case w
x	X	Lower case x
8,#121;	y	Lower case y
z	z	Lower case z
8#123;	{	Opening curly brace
8#124;	ì	Vertical line
8#125;	}	Closing curly brace
~	~	Tilde
8#127;		Delete
WHIE!,		Delete

CHARAC	TER	RS .
		Non-breaking space
¡	i	Inverted
		exclamation mark
¢	¢	Cent symbol
£	£	Pound symbol
¤	Ħ	Currency symbol
¥	¥	Yen symbol
¦	1	Broken vertical bar
§	§	Section symbol
¨		Umlaut
©	0	Copyright
ª	a	Feminine ordinal
«	«	Double-left arrow
¬	_	"Not" symbol
­		Soft hyphen
®	®	Registered
¯	-	Overline
°	0	Degree symbol
±	±	Plus-or-minus
²	2	Squared
³	3	Cubed
´	,	Acute accent
µ	μ	Micro symbol
¶	1	Paragraph symbol
·	Ü	Middle dot
¸		Cedilla
¹	1	Superscript "1"
º	0	Masculine ordinal
»	>>	Double-right arrow
¼	1/4	One quarter
½	1/2	One half
¾	3/4	Three quarters
¿	ż	Inverted question
		mark
À	À	A with grave
Á	Á	A with acute
Â	Â	A with circumflex
Ã	Ã	A with tilde
Ä	Ä	A with umlaut
Å	Å	A with ring
Æ	Æ	AE
Ç	Ç	C with cedilla
È	È	E with grave
É	É	E with acute
Ê	Ê	E with circumflex
Ë	Ë	E with umlaut
Ì	Ì	I with grave
Í	Í	I with acute
Î	Î	I with circumflex
	-	

CHARAC	TEF	เร
Ï	Ĭ	I with umlaut
Ð	Ð	ETH
Ñ	Ñ	N with tilde
Ò		O with grave
Ó	Ó	O with acute
Ô	ô	O with circumflex
Õ	Õ	O with tilde
Ö	Ö	O with umlaut
×	×	Multiply symbol
Ø	Ø	O with slash
Ù	Ù	U with grave
Ú	Ú	U with acute
Û	Û	U with circumflex
Ü	Ü	U with umlaut
Ý	Ý	Y with acute
Þ	Þ	THORN
ß	ß	Sharp S
à	à	A with grave
á	á	A with acute
â	â	A with circumflex
ã	ã	A with tilde
ä	ä	A with umlaut
å	å	A with ring
æ	æ	AE
ç	ç	C with cedilla
è	è	E with grave
é	é	E with acute
ê	ê	E with circumflex
ë	ë	
ì	ì	I with grave
í	ĺ	I with acute
î	î	I with circumflex
ï	ï	I with umlaut
ð	ð	ETH
ñ	ñ	N with tilde
ò	ò	O with grave
ó		O with acute
ô	ô	O with circumflex
õ	õ	O with tilde
ö	ö	O with umlaut
÷	÷	Divide symbol
ø	Ø	O with slash
ù	ù	
ú	ú	U with acute
û	û	
ü	ü	
ý	ý	Y with acute
þ	þ	THORN
ÿ	ÿ	Y with umlaut

#### **HTML Links**

- ◆HTML uses the <a> (anchor) tag to create a link to another document.
- ◆An anchor can point to any resource on the Web: an HTML page, an image, a sound file, a movie, etc.

## The Anchor Tag and the href Attribute

<a href="url">Text to be displayed</a>

- ◆The <a> tag is used to create an anchor to link from.
- ◆The href attribute is used to address the document to link to.
- ◆The words between the open and close of the anchor tag will be displayed as a hyperlink.

<a href="http://www.pccu.edu.tw/">中國文化大學</a>

### **The Target Attribute**

- ◆Define where the linked document will be opened.
- ◆The line below will open the document in a new browser window:

```
<a href="http://www.pccu.edu.tw/"
target="_blank">中國文化大學</a>
```

## The Anchor Tag and the Name Attribute

- ◆The name attribute is used to create a named anchor.
- Create links that can jump directly into a specific section on a page.

```
<a name="tips">Text to be displayed</a>
```

```
<a href="#tips">Jump to the Useful Tips
Section</a>
```

```
<a href ="http://www.pccu.edu.tw/index.html#tips"> Jump
to the Useful Tips Section</a>
```

## The Anchor Tag and the Name Attribute

```
<body>
<h1>
   <a href="#p1">第一段</a><br >
   <a href="#p2">第二段</a><br >
   <a href="#p3">第三段</a><br >
   <a href="#p4">第四段</a><br >
   <a href="#p5">第五段</a><br >
   <a href="#p6">第六段</a><br >
</h1>
<h2><a name="p1"></a>由教育部主辦...。</h2>
```

## The Anchor Tag and the Name Attribute

```
<h2><a name="p2"></a>「第24屆世界....。</h2>
```

```
<h2><a name="p3"></a>展現人文藝術之風...。</h2>
```

```
<h2><a name="p4"></a>2007世界大學運動會...。</h2>
```

```
<h2><a name="p5"></a>教育部杜正勝表示...。</h2>
```

```
<h2><a name="p6"></a>杜部長認為,會...。</h2></body>
```

### **HTML Links - Tip**

- Always add a trailing slash to subfolder references.
  - href="http://www.w3schools.com/html", you will generate two HTTP requests to the server, because the server will add a slash to the address and create a new request like this: href="http://www.w3schools.com/html/"

#### **HTML Tables**

◆Tables are defined with the tag.

```
row 1, cell 1
row 1, cell 2
row 2, cell 1
row 2, cell 2
```

#### **HTML Tables**

- ◆ Tables are defined with the tag.
- A table is divided into rows (with the 
  tag).

```
\|\operatorname{row} 1, \operatorname{cell} 1\| \operatorname{row} 1, \operatorname{cell} 2\|
  row 1, cell 1
  row 1, cell 2
                                row 2, cell 1 row 2, cell 2
 row 2, cell 1
```

#### **HTML Tables**

- Each row is divided into data cells (with the td> tag).
- ◆The letters td stands for "table data".

```
row 1, cell 1
row 1, cell 2
row 2, cell 1
row 2, cell 2
```

```
row 1, cell 1 row 1, cell 2 row 2, cell 1 row 2, cell 2
```

can contain text, images, lists, paragraphs, forms, horizontal rules, tables, etc.

#### **Tables and the Border Attribute**

Without specification of border attribute:

```
row 1, cell 1
row 1, cell 2
row 2, cell 1
row 2, cell 2
```

```
row 1, cell 1 row 1, cell 2 row 2, cell 1 row 2, cell 2
```

row 1, cell 2 row 1, cell 2 row 2, cell 1 row 2, cell 2

### **Headings in a Table**

Headings in a table are defined with the

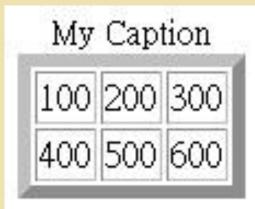
tag.

HeadingAnother Headingrow 1, cell 1row 1, cell 2row 2, cell 1row 2, cell 2

```
Heading
Another Heading
row 1, cell 1
row 1, cell 2
row 2, cell 1
row 2, cell 2
```

### Table with a caption

```
<caption>My Caption
100
200
300
400
500
600
```



## Table cells that span more than one column

```
Name
 Telephone
>
 Bill Gates
 555 77 854
 555 77 855
Telephone
             Name
Bill Gates 555 77 854 555 77 855
```

## Table cells that span more than one row

```
First Name:
 Bill Gates
Telephone:
 555 77 854
First Name: Bill Gates
555 77 855
                   555 77 854
               Telephone:
555 77 855
```

#### **HTML Lists**

- ◆An unordered list is a list of items. The list items are marked with bullets (typically small black circles).
- ◆An unordered list starts with the tag.
  Each list item starts with the tag.

#### **Ordered Lists**

- The ordered list items are marked with numbers.
- An ordered list starts with the tag. Each list item starts with the tag.
- Inside a list item you can put paragraphs, line breaks, images, links, other lists, etc.

```
  col>
  cli>Coffee
  Milk
  Soda
```

- 1. Coffee
- 2. Milk
- 3. Soda

## The Image Tag and the Src Attribute

- ◆In HTML, images are defined with the <img> tag.
- ◆The <img> tag is empty, which means that it contains attributes only and it has no closing tag.
- ◆To display an image on a page, you need to use the src attribute. Src stands for "source". The value of the src attribute is the URL of the image you want to display on your page.

```
<img
src="http://www.pccu.edu.tw/images/top_01.gif">
```

## Lynx Browser

```
Lynx (web browser) - Wikipedia, the free encyclopedia (pl of 4)
  #copyright
vnx (web browser)
From Wikipedia, the free encyclopedia.
  Jump to: nevination, search
  Wikipedia Main Page displayed Lynx being used on
   Stable release: 2.8.5 (Schroory 4, 2004) [[-/ ]]
  Lynx is a text-only and brown for use on cursor-addressable, character cell manuals.
  Browsing in Lynx consists of highlighting the chosen link using cursor keys, or having all links on a page numbered
  and entering the chosen link's number. Current versions support 🥽 and many 👭 features. Tables are linearized
  (scrunched together one cell after another without tabular structure), while frames are identified by name and can
  be explored as if they were separate pages.
  Lynx is a product of the Distributed Computing Group within Academic Computing Services of the
  and was originally developed by Low Montall, Michael Grobe and Charles Rezac. Garrett Blythe created continue and
  later joined the Lynx effort as well. Foteos Macrides ported much of Lynx to was and maintained it for a time. In
  1995, Lynx was released under the
                                                   , and is now maintained by a group of volunteers.
  Lynx was originally designed for and VMS and remains the most popular console browser on shall be a versions. Versions
  are also available for on, and recent versions run on all warmen releases. There is also a Macintosh
  version called MacLyna "for System 7 and later", but it is not regularly updated.
  Because of its the second friendly interface, Lynx was once popular with visually-impaired users, but better
  press space for next page --
 Arrow keys: Up and Down to move. Right to follow a link; Left to go back.
 H)elp O)ptions P)rint G)o M)ain screen Q)uit /=search [delete]=history list
```

#### The Alt Attribute

- The alt attribute is used to define an "alternate text" for an image.
- The value of the alt attribute is an authordefined text.
- ◆The "alt" attribute tells the reader what he or she is missing on a page if the browser can't load images.

```
<img src="boat.gif" alt="Big Boat">
```

## Insert images from different locations

```
<img src="/images/netscape.gif" >
```

### **Background Image**

<body background="background.jpg">

### Adjust images to different sizes

<img src="hackanm.gif" width="20" height="20">

## **Aligning images**

```
<img src="hackanm.gif"
align="bottom" width="48" height="48">
```

```
<img src="hackanm.gif"
align="middle" width="48" height="48">
```

```
<img src="hackanm.gif"
align="top" width="48" height="48">
```

◆Note: The bottom alignment is the default!

## Make a hyperlink of an image

```
<a href="lastpage.htm">
    <img border="0" src="buttonnext.gif" >
    </a>
```

### Create an image map

```
<img src="planets.gif" width="145" height="126"</pre>
usemap="#planetmap">
<map id="planetmap" name="planetmap">
  <area shape="rect" coords="0,0,82,126"
        alt="Sun" href="sun.htm">
  <area shape="circle" coords="90,58,3"</pre>
        alt="Mercury" href="mercur.htm">
  <area shape="circle" coords="124,58,8"</pre>
        alt="Venus" href="venus.htm">
</map>
```

### **HTML Backgrounds: colors**

- ◆The background can be a color or an image.
- The bgcolor attribute specifies a backgroundcolor for an HTML page.
- The value of this attribute can be a hexadecimal number, an RGB value, or a color name:

```
<body bgcolor="#000000">
<body bgcolor="rgb(0,0,0)">
<body bgcolor="black">
```

當顏色代碼為#XXYYZZ時,可以用#XYZ表示,如#135與#113355表示同樣的顏色

## **HTML Backgrounds: images**

- ◆The background attribute specifies a background-image for an HTML page.
- The value of this attribute is the URL of the image you want to use.
- ◆If the image is smaller than the browser window, the image will repeat itself until it fills the entire browser window.

# If you want to use a background image, you should keep in mind:

- ◆The bgcolor, background, and the text attributes in the <body> tag are deprecated in the latest versions of HTML (HTML 4 and XHTML).
- ◆The World Wide Web Consortium (W3C) has removed these attributes from its recommendations.

## 練習1

豬小妹的履歷表	
年齢	8
住址	森林村一號
喜歡的食物	<ul><li> 甜甜圏</li><li> 事條</li><li> タメケ</li></ul>
專長	1. 睡覺 2. 睡覺 3. 睡覺
網址	我的家